Super dot

Define the rotation point, cut and correct

Drop the Super Dot on the osteotomy

Trace the moving fragment out

Set the anatomical axis

Pick up the handle and correct the bone to restore the axis

The magnitude of angulation and translation is calculated

Repeat the sequence on the Lateral image

Image Tools on the page – simple line and ruler tools, angle & Cobb angle, joint line & mid-shaft line tools
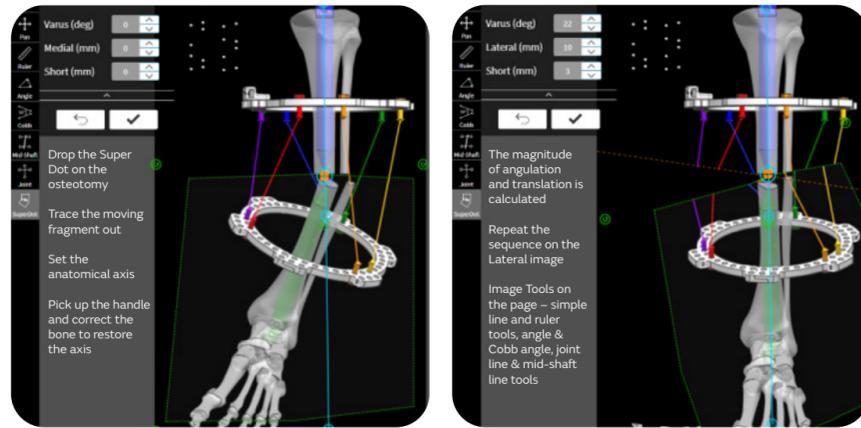
Trauma dots

Define the fracture and bring the points together

Define the edge points of fracture

Reduction brings the points on the moving fragment to meet the points on the reference fragment
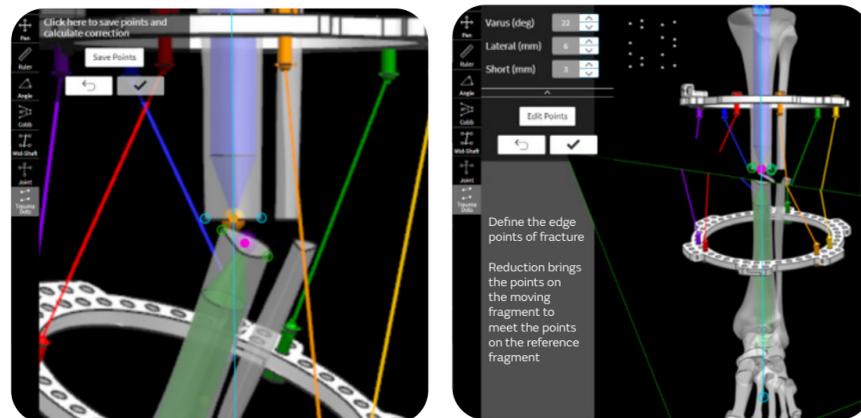
- Request an account at **www.smart-TSF.com**

- Software works on all major browsers – Chrome, Edge, Safari

- Interface is optimized for minimum 1280x960px screen

- Tablet use is supported, with optimum experience on larger (12.9") screen sizes

- Website is hosted regionally on servers dedicated to meet privacy and data protection requirements

For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

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SMART TSF◊
Circular Fixator
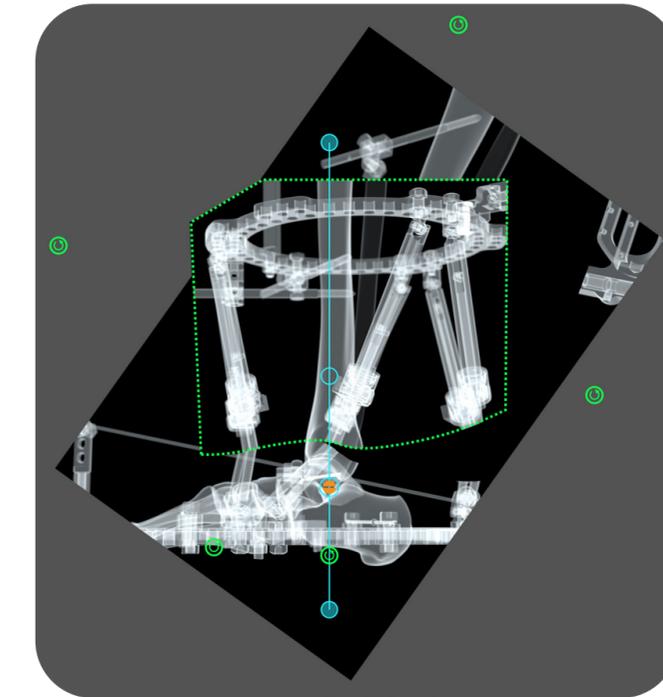
Still TSF, only smarter

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1. Keshet D, Eidelman M. Clinical utility of the Taylor spatial frame for limb deformities. ORR 2018:9 51-61 **2.** Smith+Nephew 2019. Systematic Literature Review with Meta-Analysis of Taylor Spatial Frame Clinical Effectiveness. Internal Report. EO/TRAUMA/TSF/001/v6. **3.** Smith+Nephew 2021. Investigational Static Testing to Evaluate Axial Motion within TSF Struts Internal Report. OR-21-069. **4.** Smith+Nephew 2020. Evaluation of the Wire Pull-Out Force of the Proposed Design of the Combination Wire Fixation Bolt for Potential Use in the Digital Taylor Spatial Frame System as Compared to the Existing Taylor Spatial Frame Russian Wire Fixation Bolt. Internal Report. OR-20-091. **5.** Smith+Nephew 2021. NX11 Models and Images for Validation. Internal Report.
6. Smith+Nephew 2021. SMART-TSF.com V6.0 Performance by Design. Internal Report. **7.** Ferreira N, Arkell C, Fortuin F, Saini AK. Evaluating the accuracy of the SMART taylor spatial frame software – Comparison with manual radiographic analysis methods. J Limb Lengthen Reconstr 2021;7:31-6
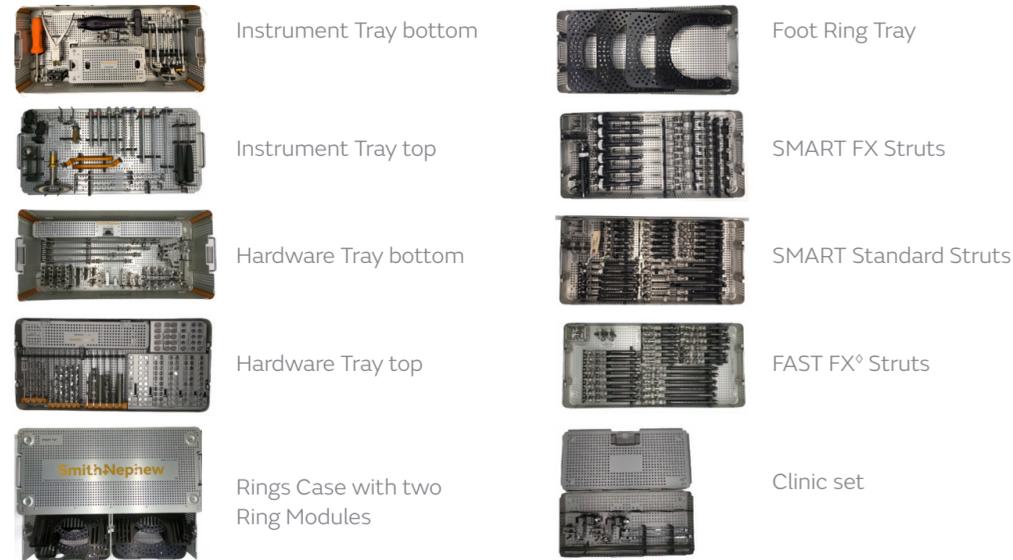
Instrument Tray bottom

Instrument Tray top

Hardware Tray bottom

Hardware Tray top

Rings Case with two
Ring Modules

Foot Ring Tray

SMART FX Struts

SMART Standard Struts

FAST FX◊ Struts

Clinic set

SMART TSF
Building on twenty years of successful clinical outcomes[1,2]

SMART TSF Rings

New Rings have laser-marking to indicate:

• Beacon placement
• Custom Strut Mount
• Classic Rings will continue to be supported by the software
• 105mm to 180mm Rings are available in pink, blue, red

SMART TSF Struts

• The new SMART FX Strut has a re-designed acute adjustment function that enables fracture reduction in the OR
• Fine adjustments can then be made to dial in the correction
• SMART STANDARD Struts have fine adjustment only
• All SMART TSF Struts have 0.25mm adjustability
• SMART TSF Struts have less axial play than classic TSF Struts3
• Improved overlap zones and working length reduce the need for Strut change-outs compared to the classic range

Dynamization

• The Dynamization Washer is a metal washer with silicone overmold
• When incorporated into a TSF it introduces axial micromotion at the fracture site without introducing shear
• The Dynamization Washer is used in conjunction with a dedicated Long Shoulder Bolt
• All 12 components are supplied sterile in the Dynamization Kit

Step-off plates

• Mount Struts off the Ring
• Neutral Step-off Plate offsets in the plane of the Ring to help avoid collisions
• 30mm Step-off Plate offsets 30mm above or below the plane of the Ring, allowing Struts to connect to Rings that are close together

Conversion clamp

• Allows conversion of a TSF to static frame
• Threaded Rods can be connected to Rings that are not parallel to each other using a pair of Conversion Clamps

Wire Fixation Bolt

• Slotted and Cannulated
• Grooved slot provides improved friction grip on the wire compared to previous designs4
• Regular and long lengths
• 10mm Hex Head
• Hex recess allows control with 3mm Hexdriver

Extended HA Coated Pins

• HA Coating extends to shaft of the Pin, placing a HA substrate at the skin interface
• New 5mm increments on 4.5mm, ranging 10mm to 50mm thread length

Tensioner

• Designed for ergonomic handling
• Open flush zones designed to maximize exposure during cleaning without need for disassembly
• Modular Attachment Standard interfaces with the Ring like a jaw
• New Modular Wrench Attachment controls the Wire Fixation Bolt without need for an additional wrench, allowing one-handed tensioning

SMART TSF◊
Real Intelligence behind the world's most widely used hexapod

The SMART TSF Beacon is the key to unlocking the power of new SMART TSF software

• The Beacon is attached to the TSF during X-ray capture
• 16 radiopaque beads are captured in the X-ray image
• SMART TSF software detects the Beacon to scale and calibrate X-ray images
• Deformity parameters are measured on the calibrated X-ray
• Mounting Parameters are automatically calculated
• An orthogonal image of the Ring is no longer required
• Images should be taken orthogonal to the anatomy, with the AP view being most important
• The SMART TSF Beacon is intended to make software inputs more efficient and accurate than spatialframe.com[5-6]

SMART TSF Software retains the functionality of spatialframe.com, and brings many digital enhancements to your TSF programming[5-6]

• Programs are organized by patient
• HIPAA and GDPR compliant, with the option of no patient info
• Create a simulated graphic of the 3D frame
• Analyze the X-ray using image upload and management tools
• Drag-and-drop Structure at Risk
• Choose 1mm or 0.25mm adjustments of Struts
• Choose 1, 2, 3 or 4 adjustments per day
• Cloud-based architecture improves speed and security, compared to spatialframe.com[6]
• Osteotomy Sandbox facilitates pre-op planning of osteotomy
• IntraOp feature permits OR staff to populate a program with basic parameters
• Fully supports all classic TSF Rings and Struts

Four options for analyzing the deformity:

1. Manual Mode – classic spatialframe.com with no X-ray upload
2. OCP – Plot the Origin and Corresponding Point on axes on digital X-rays
3. Super Dot – define the rotation point on X-ray images in the software and digitally restore alignment
4. Trauma Dots – define the edge points of two bone segments on X-ray images in the software to view the digtally-reduced fracture